

## EAST Search History

## EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L2	1427	166/319,321,323.cds.	US- PGRUB; USPAT; USOCR	AND	OFF	2011/04/12 18:06
L3	0	L2 pressure ADJ delimited	US- PGRUB; USPAT; USOCR	AND	OFF	2011/04/12 18:06
L4	38	L2 pressure ADJ range	US- PGRUB; USPAT; USOCR	AND	OFF	2011/04/12 18:06
L5	7	L4 state	US- PGRUB; USPAT; USOCR	AND	OFF	2011/04/12 18:06
S1	1	("20070125554").PN.	US- PGRUB; USPAT; USOCR	OR	OFF	2008/07/23 14:43
S2	1	("5490564").PN.	US- PGRUB; USPAT; USOCR	OR	OFF	2008/07/23 14:44
S3	1231	166/319,321,323.cds.	US- PGRUB; USPAT; USOCR	AND	OFF	2008/07/23 14:58
S4	337	S3 lock piston	US- PGRUB; USPAT; USOCR	AND	OFF	2008/07/23 14:58
S5	1231	166/319,321,323.cds.	US- PGRUB; USPAT; USOCR	AND	OFF	2008/07/23 16:56
S6	337	S5 lock piston	US- PGRUB; USPAT; USOCR	AND	OFF	2008/07/23 16:56
S7	99	S6 collet	US- PGRUB; USPAT; USOCR	AND	OFF	2008/07/23 16:56
S8	3	S6 (damping OR damped)	US- PGRUB; USPAT; USOCR	AND	OFF	2008/07/23 17:33

S9	31	("3941510"   "4036297"   "4149555"   "4457334"   "4474242"   "4554981"   "4682656"   "4691779"   "4708595"   "4989828"   "4997160"   "5167282"   "5211242"   "5253713"   "5295403"   "5598619"   "5622199"   "5647573"   "5836393"   "6148923"   "6152167"   "6170573"   "6296008"   "6325151"   "6523613"   "6554580"   "6637510"   "6705404"   "6840703"   "6907926"   "RE31845").FN. OR ("7331392").URFN.	US- PGRUB; USPAT; USOCR	AND	OFF	2008/07/24 09:22
S10	1	("6907926").FN.	US- PGRUB; USPAT; USOCR	OR	OFF	2008/07/24 09:47
S11	1231	166/319,321,323.ccls.	US- PGRUB; USPAT; USOCR	AND	OFF	2008/07/24 10:20
S12	136	S11 motor	US- PGRUB; USPAT; USOCR	AND	OFF	2008/07/24 10:20
S13	120	S12 (processor OR control OR controller)	US- PGRUB; USPAT; USOCR	AND	OFF	2008/07/24 10:21
S14	1	("20020046834").FN.	US- PGRUB; USPAT; USOCR	OR	OFF	2008/07/24 11:02
S15	1476	166/126,128,131,133,183,188,194.ccls.	US- PGRUB; USPAT; USOCR	AND	OFF	2009/10/19 16:58
S16	71	S15 (radial ADJ (port OR ports OR passage OR nozzle))	US- PGRUB; USPAT; USOCR	AND	OFF	2009/10/19 16:58
S17	34	("20020027003"   "2307949"   "3454029"   "3967647"   "4084613"   "4217934"   "4249599"   "4402517"   "4524831"   "4621695"   "4660646"   "4660647"   "4770250"   "5058673"   "5193615"   "5323853"   "5826661"   "5832996"   "5947205"   "5957207"   "5971004"   "6012518"   "6085845"   "6119783"   "6247536"   "6298919").PN. OR ("6523613").URFN.	US- PGRUB; USPAT; USOCR	AND	OFF	2009/10/19 17:05
S18	1	("7331392").FN.	US- PGRUB; USPAT; USOCR	OR	OFF	2009/10/19 17:06

S19	31	("3941510"   "4036297"   "4149555"   "4457334"   "4474242"   "4554981"   "4682656"   "4691779"   "4708595"   "4989828"   "4997160"   "5167282"   "5211242"   "5253713"   "5295403"   "5598619"   "5622199"   "5647573"   "5836393"   "6148923"   "6152167"   "6170573"   "6296008"   "6325151"   "6523613"   "6554580"   "6637510"   "6705404"   "6840703"   "6907926"   "RE31845").FN. OR ("7331392").URFN.	US- PGRUB; USPAT; USOCR	AND	OFF	2009/10/19 17:24
S20	0	"166".clas. (packer) (((first second third) ADJ (state)) SAME pressure) (radial ADJ (port OR nozzle OR opening OR flowpath))	US- PGRUB; USPAT; USOCR	AND	OFF	2009/10/19 17:29
S21	0	"166".clas. (packer) (((first second third) ADJ (state)) SAME pressure)	US- PGRUB; USPAT; USOCR	AND	OFF	2009/10/19 17:29
S22	2	"166".clas. (packer) (((first second third) ADJ (state)))	US- PGRUB; USPAT; USOCR	AND	OFF	2009/10/19 17:29
S23	193	"166".clas. (packer) plug (radial ADJ (port OR nozzle OR opening OR flowpath))	US- PGRUB; USPAT; USOCR	AND	OFF	2009/10/19 17:30
S24	1301	166/319,321,323.cds.	US- PGRUB; USPAT; USOCR	AND	OFF	2009/10/19 17:48
S25	51	S24 (index OR indexable)	US- PGRUB; USPAT; USOCR	AND	OFF	2009/10/19 17:48
S26	14	S25 (radial ADJ (port OR ports))	US- PGRUB; USPAT; USOCR	AND	OFF	2009/10/19 17:49
S27	31	("3941510"   "4036297"   "4149555"   "4457334"   "4474242"   "4554981"   "4682656"   "4691779"   "4708595"   "4989828"   "4997160"   "5167282"   "5211242"   "5253713"   "5295403"   "5598619"   "5622199"   "5647573"   "5836393"   "6148923"   "6152167"   "6170573"   "6296008"   "6325151"   "6523613"   "6554580"   "6637510"   "6705404"   "6840703"   "6907926"   "RE31845").FN. OR ("7331392").URFN.	US- PGRUB; USPAT; USOCR	AND	OFF	2009/10/19 17:53
S28	1	("5490564").PN.	US- PGRUB; USPAT; USOCR	OR	OFF	2009/10/19 17:57
S29	2731	(S15 OR S24)	US- PGRUB; USPAT; USOCR	AND	OFF	2009/10/19 18:04

S30	160	S29 (radial ADJ (port OR ports))	US- PGRUB; USPAT; USOCR	AND	OFF	2009/10/19 18:04
S31	4032	S30 (piston ADJ lock) OR (locking ADJ piston) OR (lock ADJ piston)	US- PGRUB; USPAT; USOCR	AND	OFF	2009/10/19 18:04
S32	4	S30 ((piston ADJ lock) OR (locking ADJ piston) OR (lock ADJ piston))	US- PGRUB; USPAT; USOCR	AND	OFF	2009/10/19 18:05
S33	0	("2007/0125554").URPN.	USPAT	AND	OFF	2009/10/19 18:09
S34	161	(bosley.in.)	USPAT	AND	OFF	2009/10/19 18:10
S35	5	"166".clas. S34	USPAT	AND	OFF	2009/10/19 18:10
S36	31	("3941510"   "4036297"   "4149555"   "4457334"   "4474242"   "4554981"   "4682656"   "4691779"   "4708595"   "4989828"   "4997160"   "5167282"   "5211242"   "5253713"   "5295403"   "5598619"   "5622199"   "5647573"   "5836393"   "6148923"   "6152167"   "6170573"   "6296008"   "6325151"   "6523613"   "6554580"   "6637510"   "6705404"   "6840703"   "6907926"   "RE31845").FN. OR ("7331392").URPN.	US- PGRUB; USPAT; USOCR	AND	OFF	2009/10/20 09:50
S37	59558	"166".clas.	US- PGRUB; USPAT; USOCR	AND	OFF	2009/10/20 09:54
S38	2710	S37 ((sleeve ADJ valve) OR (sliding ADJ sleeve))	US- PGRUB; USPAT; USOCR	AND	OFF	2009/10/20 09:55
S39	1591	S38 (hydraulic or hydraulically)	US- PGRUB; USPAT; USOCR	AND	OFF	2009/10/20 09:55
S40	855	S39 (lock OR locked OR locking)	US- PGRUB; USPAT; USOCR	AND	OFF	2009/10/20 09:55
S41	107	S39 ((lock OR locked OR locking) ADJ (piston OR mandrel))	US- PGRUB; USPAT; USOCR	AND	OFF	2009/10/20 09:55
S42	28	("2307949"   "3454029"   "3967647"   "4084613"   "4217934"   "4402517"   "4524831"   "4621695"   "4660648"   "4660647"   "4770250"   "5058673"   "5323853"   "5826661"   "5832996"   "5947205"   "5957207"   "5971004"   "6012518"   "6085845"   "6119783").PN. OR ("6502640").URPN.	US- PGRUB; USPAT; USOCR	AND	OFF	2009/10/20 10:19

S43	27	("2307949"   "3454029"   "3967647"   "4084613"   "4217934"   "4402517"   "4481864"   "4524831"   "4621695"   "4660646"   "4660647"   "4718494"   "4770250"   "5058673"   "5323853"   "5826661"   "5832996"   "5947205"   "5957207"   "5971004"   "6012518"   "6085845"   "6119783").PN. OR ("6505684").URPN.	US- PGRUB; USPAT; USOCR	AND	OFF	2009/10/20 10:22
S44	235	166/323.ccls.	US- PGRUB; USPAT; USOCR	AND	OFF	2009/10/20 10:32
S45	17	S44 (radial ADJ (ports OR openings OR nozzles OR flowpaths))	US- PGRUB; USPAT; USOCR	AND	OFF	2009/10/20 10:33
S46	123	S44 (hydraulic OR hydraulically)	US- PGRUB; USPAT; USOCR	AND	OFF	2009/10/20 10:39
S47	12	S46 ((lock OR locked OR locking) ADJ (close OR closed))	US- PGRUB; USPAT; USOCR	AND	OFF	2009/10/20 10:39
S48	230	"166".clas. ((lock OR locked) ADJ closed)	US- PGRUB; USPAT; USOCR	AND	OFF	2009/10/21 16:10
S49	1	("6,082,459").PN.	US- PGRUB; USPAT; USOCR	OR	OFF	2009/10/21 16:39
S50	5	("20060108115"   "6981551"   "6983795"   "7124824"   "7290610").PN. OR ("7451816").URPN.	US- PGRUB; USPAT; USOCR	AND	OFF	2009/10/21 16:48
S51	21	"166".clas. ((index OR indexing) ADJ (piston OR ring))	US- PGRUB; USPAT; USOCR	AND	OFF	2009/10/21 18:29
S52	24	("4113012"   "4403659"   "4915175"   "5010955"   "5295538"   "5377750"   "5609178"   "5609204"   "5730223"   "5890540"   "5901796").PN. OR ("6220357").URPN.	US- PGRUB; USPAT; USOCR	AND	OFF	2009/10/21 18:54
S53	21	"166".clas. ((index OR indexing) ADJ (piston OR ring))	US- PGRUB; USPAT; USOCR	AND	OFF	2009/10/22 10:38
S54	3	S53 (test OR testing)	US- PGRUB; USPAT; USOCR	AND	OFF	2009/10/22 10:38
S55	14	"166" clas. ((index OR indexing) ADJ (piston ))	US- PGRUB; USPAT; USOCR	AND	OFF	2009/10/22 10:40

## EAST Search History (Interference)

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**4/ 12/ 2011 6:06:57 PM**

**C:\Documents and Settings\ bharcourt\ My Documents\ EAST\ Workspaces\ 10579274 plug with actuating mechanism.wsp**